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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/883,112      | 06/14/2001  | Frederick F. Becker  | UTXC:626US/MCB      | 7970             |

7590 07/19/2004

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EXAMINER

DO, PENSEE T

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1641

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                               |  |
|------------------------------|-------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/883,112 | Applicant(s)<br>BECKER ET AL. |  |
|                              | Examiner<br>Pensee T. Do      | Art Unit<br>1641              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-31, 33, 34 is/are rejected.
- 7) ☒ Claim(s) 32 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Withdrawn of Finality***

Due to erroneous rejections by the Office, the finality of the previous office is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24, 25, 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ewart et al. (US 5,922,537).

Ewart teaches an assay method, sandwich, indirect, competitive or direct assay, using reporter particles such as dielectric particles (see col. 4, lines 6-14). The core particles can be made from a wide variety of inorganic materials including metals such as gold, silver, platinum (see col. 5, lines 17-26). The particle core can be encapsulated in a polymer such as polystyrene (see col. 7, lines 20-30). The dielectric particles can be engineered to have one or more dielectric properties or paramagnetic properties and phosphorescent properties (see col. 11, lines 7-13). In the assay, the target analyte is contacted with the reporter particles linked to a recognition molecule that specifically binds the target analyte. Detection is performed by comparison of the dielectric constant of unbound dielectric particles/labels and that of the complexed dielectric particles/labels using a biosensor to measure those properties. (see col. 4, lines 53-65).

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The dielectric particles/labels contributes the dominant dielectric constant (second dielectric property) in the complex analyte-recognition molecule-dielectric label (see col. 14, lines 33-38). The dielectric property of an unbound dielectric label is the first dielectric property. The recognition molecule/linking element comprises of antibody, hormone, antigen, etc. (see col. 7, lines 54-65). The sample is bodily fluid such as blood (see col. 4, lines 49-51). Ewart also teaches that the dielectric particles/labels move in an electrophoretic field when being applied in a separation method (see col. 11, lines 27-31). Trapping is performed when the particles captures the analyte. Sorting is the same as separating and purification.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ewart et al. (US 5,922,537).

Ewart has been discussed above.

However, Ewart fails to teach adding to the sample a plurality of engineered microparticles in a method of identifying one or more complexes within a sample. Ewart also fails to teach that the sample comprises blood, urine, saliva, amniotic fluid, biopsy, cell suspensions, cell lysate, chromatographic fraction or conditioned media.

It would have been obvious to one of ordinary skills in the art to use the engineered particles of Ewart in a plurality for detecting one or more complexes within one sample which is economically advantageous because time and effort can be saved and mass detection/sorting/separation can be performed all in one batch.

Regarding the limitation of claim 26, the sample comprising of food, water, food processing, food distribution, mineral, and ore, since Ewart teaches, in col. 1, lines 32-35, that detection of analyte in sample may be indicative of a particular condition in microorganisms and higher life forms including animals and humans, one of ordinary skills in the art would find it obvious to detect analytes from a variety of sample sources such as food, water because food and water contain microorganisms and food such meat products are sources from animals.

#### ***Allowable Subject Matter***

Claims 32 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior arts fail to teach that the insulating layer comprises one or more self-assembled monolayer layers.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pensee T. Do whose telephone number is 571-272-0819. The examiner can normally be reached on Monday-Friday, 7:00-3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pensee T. Do  
Patent Examiner  
July 16, 2004



CHRISTOPHER L. CHIN  
PRIMARY EXAMINER  
GROUP 1800/641

7/17/04